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AUTHOR Patterson, Becky
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ABSTRACT

It is argued that software evaluation is the key to the acquisition of successful microcomputer programs for community college reading/writing centers, but that currently available evaluation forms are not adequate for this task. Following a brief discussion of the problems related to these forms, a detailed list of general guidelines for evaluating reading and writing computer software is presented. The guidelines are organized in three categories: the educational soundness of the software; the ability of the software to fully utilize microcomputer capabilities; and the validity of the software for educational, as opposed to personal, use. It is noted that the results of considering these guidelines should be an increased understanding of the scope of computers and software and an ability to review software for personal and local needs. (Author/ESR)

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EVALUATING MICROCOMPUTER SOFTWARE FOR A COMMUNITY COLLEGE READING/WRITING CENTER

by

Becky Patterson

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EVALUATING MICROCOMPUTER SOFTWARE FOR A COMMUNITY COLLEGE READING/WRITING CENTER

Your college has just bought a microcomputer, and you've decided to join the era of high technology. Now what do you do? The classic mistake of many neophytes in this field is thinking that they can take a simple programming course and write programs for their computer. Wrong. Writing one program is equivalent to writing an entire textbook (4:92). Therefore, the best place to start is evaluating current software.

Problems and solutions

Software evaluation presents several challenges for the beginner. First, it is not exactly like evaluating a textbook; you must understand the complexity of the microcomputer itself, as well as the software. Second, it is hard to find any uniformity in computer evaluation forms. Microcomputers are a relatively recent phenomenon, having been marketed extensively in education only since 1978 (12:ix). Because of this recency, few definitive guidelines are available. Almost every magazine article on computer assisted instruction carries its own evaluation form.

A final problem for neophytes is that most forms are too short. They assume a knowledge of both software and hardware (computers) that many users do not yet have.

Recognizing these problems, I have developed a thorough list of guidelines for evaluating reading and writing computer software. They represent "state-of-the-art knowledge, experience, and intuitions about what constitutes a 'good' computer program" (7:3). Understanding these guidelines should enable you to venture wisely into the purchase of your first software.

Three general categories will be examined. First, is the software educationally sound? Next, does it fully utilize the computer? Finally, will this software be valid for educational, as opposed to personal, use?

Educational validity

The first and most important criteria center around the educational soundness of the software. If a program is not pedagogically sound, other criteria need not be considered. At this level, the criteria are the same as those used to evaluate reading or writing textbooks. Much of the software published in 1982 and early 1983 does not meet this standard.

1. Are the objectives well-defined and current?
2. Is the scope of the program complete?
3. Is the program factually correct?
4. Is it well-organized and logical?
5. Does it teach or just diagnose?
6. Is it clear and interesting (directions and text)?
7. What about the questions? Are they multiple choice? What level?

8. Can a teacher insert his/her own words, vocabulary level, and age level?
9. What about the interest level, reading level, vocabulary level, and age level?
10. What level does it function at (drill and practice, tutorial, application of skills, independent learning, simulation)? Is that level appropriate?

Computer utilization

Computers are capable of functions that books can never duplicate. Does the software take advantage of a computer's sophisticated processing, or is it just electronic page-turning? Software in reading and writing is currently lagging behind sophisticated software in medicine, aviation, business, and math.

1. Is computer instruction the right way to go with this skill or just a gimmick?
2. Is the branching structure highly ramified, or does it just parallel a programmed text?
3. Is the software just drill and practice, or does it include games? or simulations?
4. Does it make ample use of graphics capabilities?
5. If graphics are used, are they understandable and necessary--or just flashy?
6. Is learning adjusted to individual pace?
7. Can you by-pass instructions once you know them?
8. Can you stop mid-stream, and come back to restart at that point?
9. Does the program personalize for you?

10. Are there summary reports?
11. Is there a student record keeper?
12. Are the directions clear and consistent about how to enter information?
13. Is the method of answering consistent?
14. If questions are asked twice, is the screen cleared before the original question reappears?
15. Are the error messages non-judgmental?
16. Do answer-analysis routines permit a wide range of responses?
17. Is the timing about right for responses and for booting up new material?
18. Is there a teacher mode? Does it serve any purpose?
19. Is the output screen jammed with text that is non-essential? Does the text run off the screen at the sides, or at the top? Does the text disappear without your directing it to?
20. Does it include different sensory learning modes: visual, tactile, audio?

Special educational considerations

The final criteria for evaluating software are related to its planned use. Selecting software for educational use is different than selecting it for home use. In a school setting, all disks will receive heavier use, and many students will not be familiar with their care. Furthermore, educational software "should provide instructional experiences heretofore impossible as well as imaginative approaches to existing components of the curriculum" (7:31).

A. Institutional considerations

You need to know the capabilities of the existing hardware at your

institution. If the software under consideration does not fit your current hardware, adaptation is prohibitive. In addition, software published today is expensive. Cost will be a factor in your decision.

1. What computer is it made for?
2. Does it need a color screen?
3. Does this software need two disk drives?
4. Does it match the memory capabilities of your computer?
5. What size printer is needed for this software?
6. What is the policy on making copies of disks?
7. What is the policy on how many students are allowed to use a disk?
8. Can more than one student use the material at the same time?
9. What is the cost per student?
10. Would you prefer a range of programs under $100, or one expensive and comprehensive program?
11. What priority does this have at your institution?

B. Teacher considerations

Because these programs are for educational use, teachers must take into account special considerations that are unnecessary to consider for home use.

1. Can teachers who know little about computers figure the software out?
2. How many teachers will be using it? How will that affect teacher management systems?
3. How many students fit into the management system?
4. How much information can the teacher get about student responses?
5. Can teachers add their own lessons or words?
6. How much time does it take to preview? How easily can you get in

and out and see samples of the total program?

7. Will teachers have to write problems to go with it?
8. Will teachers have to write supplementary instructions?
9. Are instructions clear, logical, and at an appropriate reading level?
10. Is documentation available and thorough?

C. Learner considerations

Once you have previewed the program thoroughly, go through it again from a student's viewpoint.

1. How long does it take to get through the program? How long is each lesson?
2. Is teaching on the computer or in an accompanying book?
3. What happens if you give absurd responses? Does it blow the program?
4. Is it understandable what kind of response is called for?
5. What about typing errors? Are they correctible? How does the program handle misspellings?
6. What about the sounds? Do they add or detract?
7. Are right answers reinforced better than wrong answers?
8. Is it consistent?
9. Can you finish from start to end without terminating?
10. What is the size of the print?
11. How easy is it for someone who doesn't know computers?
12. Do learners LIKE the program?

Summary

The result of considering these guidelines should be two-fold. You should have increased understanding of the scope of computers and software. Also, realizing that every teacher has a set of unique

evaluative considerations, you should be able to adapt to personal and local needs, and select which criteria will be important for you. Be wary of mass-produced evaluative forms that give over-simplified ratings.

Many different factors, then, must enter into a search for the best software. Teachers must learn to be selective and to appreciate the complexities of the microcomputer. Microcomputers are a valued asset to education, and I look forward to increasingly better and more sophisticated software on the market. Now is the time to start.

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ABSTRACT
EVALUATING MICROCOMPUTER SOFTWARE FOR A COMMUNITY COLLEGE
READING/WRITING CENTER

Software evaluation is the key to successful computer programs in community college reading/writing centers. Several problems with currently available evaluation forms are presented. The author's response to these problems is the development of a thorough list of guidelines for evaluating reading and writing computer software. Three general categories are examined. First, is the software educationally sound? Next, does it fully utilize the computer? Finally, will this software be valid for educational, as opposed to personal, use? Each category is explained, and an extensive checklist of evaluative guidelines follows. The results of considering these guidelines should be an increased understanding of the scope of computers and software, and an ability to adapt these general guidelines into a software review form that is geared to personal and local needs.

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